

# RECLAMATION

*Managing Water in the West*

## ***Managing for Excellence: The Status of Project Management in Reclamation***

**Note to Reader:** The authors expect to make future changes to this document as a result of ongoing review.





## **Executive Summary**

In 2004, the Bureau of Reclamation asked the National Academy of Sciences' (NAS) National Research Council (NRC) to review Reclamation's organization, business practices, culture, and capabilities for managing construction and infrastructure in the 21st century. As a result, the NRC published a report in early 2006, *Managing Construction and Infrastructure in the 21st Century, Bureau of Reclamation* (NAS Report). Project Management (PM) is one of the nine issue areas recommended for Reclamation action and is the subject of this report. Specifically the NRC identified three PM issues: 1) Each phase of project development has a different management process, 2) The Reclamation Manual is incomplete regarding PM and there is insufficient oversight of its implementation, and 3) PM as a discipline is not well recognized in Reclamation.

The Project Management Team was assembled to address the PM issues. The Team's initial efforts were focused on an evaluation of Reclamation's current project management practices and needs, throughout the entire project development process from inception through operations and maintenance, relative to proven project management practices. The purpose of this report is to summarize the Team's findings and present the Team's recommendations. This report is offered as the basis for a subsequent implementation phase should it be necessary.

The Team members surveyed Reclamation's current practices by conducting interviews with a cross section of Reclamation managers and staff. Interviewees were those people involved with executing the planning, design, construction and operation, and maintenance phases of projects. People in peer groups such as other agencies and private firms were also interviewed to provide a basis for comparison with their practices, problems, and successes. Reclamation's project management practices were also compared to those recommended by the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK). Developed over the past 30 years, the PMBOK is a consolidation and organization of knowledge on the project management profession.

The evaluation of project management in Reclamation also took into account Reclamation's evolving mission, which has shifted from one focused on water resource development based almost entirely on planning, design, and construction of infrastructure, to one focused on the efficient and effective management of those water supplies and related resources. As a result, project management in Reclamation has moved from using centralized, highly-structured, prescribed processes carried out by functional managers to using local, more flexible personal-based approaches. The projects now are generally smaller and the positions accomplishing project management functions are at lower levels in the organization.

The Team found that the range of project management experience and current practices varied widely from region to region and from office to office within some regions. Based

on PMI's definition of project management, currently there are few people in Reclamation who have a full understanding of the project management profession, years of project management practice experience, or who have certifications. Even for most of those in Reclamation with project management experience, their expertise in project management was incidental, although very useful, to their position description responsibilities. It was found that the development and use of project management practices has arisen from the staff level of the organization up. The Team found that in the private sector there was a high correlation among the responders from the interviews in terms of philosophy, strategy, and methodology. There was an overwhelming positive response that project management must be active and proactive throughout the duration of the project and addressed on a daily basis. There was also high correlation between the private sector practices and PMBOK's recommend practices.

In general, the Team found that in Reclamation when a project manager is assigned, a project is more successful in all aspects, from the decision making process, communication with interested parties, to meeting budget, scope and schedule constraints. However, there is significant room for improvement, particularly in the initiating, integration, and closing processes. It was found that project management is not a consistently well understood or well executed process across Reclamation and has not been seen as a priority by management except when projects are high profile. It was also found that Reclamation has inconsistent approaches, solutions, and policies, which can be characterized as providing flexibility, but can lead to problems in some areas such as effective and consistent communication with management and stakeholders. It was suggested to the Team that Reclamation realize that the academic discipline of project management is no longer a "soft" science, but is now an American National Standards Institute standard. The knowledge, skills, and abilities of project management should be considered no less important than its science and engineering disciplines as they relate to the success of Reclamation's mission.

Through the needs assessment, the Team validated the three NRC findings, listed above, and recommends that Reclamation diligently implement the practice of sound project management for all work that meets the definition of a project (defined in Chapter 5 of this report). A clear mandate from management, via the Reclamation Leadership Team, is necessary to ensure successful implementation. Therefore, the Team also recommends that Phase II be completed.